

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-16, 25, 28, and 29 are presently active in this case, Claims 1-16 and 25 having been amended, Claims 17-24, 26, and 27 having been canceled without prejudice or disclaimer, and Claims 28 and 29 having been added by way of the present Amendment. The specification and title have also been amended. Care has been taken such that no new matter has been entered.

Pending Claims 6, 7, and 10-16 have been withdrawn from consideration as being directed to non-elected species; however, these claims remain pending since they depend from linking claims. The remaining non-elected claims have been canceled without prejudice or disclaimer. Newly added Claims 28 and 29 read on the elected species.

In the outstanding Official Action, the title of the invention was objected to as not being descriptive. The title has been amended to be descriptive, and therefore the Applicants request the withdrawal of the objection to the title.

Claims 1-5, 8, 9, and 25 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Official Action requests clarification of whether a subcombination of a component mounting apparatus is being claims or whether the combination of a component mounting apparatus and plural kinds of components or boards are being claims. The Applicants submit that the claims clearly recite a subcombination of a

“component mounting system” and not the components and boards, which are merely inferentially referred to in the claims. Accordingly, the Applicants request the withdrawal of the indefiniteness rejection.

Claims 1-5, 8, 9, and 25 were rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al. (U.S. Patent No. 7,082,680). For the reasons discussed below, the Applicants request the withdrawal of the anticipation rejection.

In the Office Action, the Kim et al. reference is indicated as anticipating independent Claim 25. The Applicants note that a claim is anticipated only if each and every element as set forth in the claims is found, either expressly or inherently described, in a single prior art reference. As will be demonstrated below, the Kim et al. reference clearly does not meet each and every limitation of independent Claim 25.

Claim 25 of the present application recites a component mounting system comprising a component mounting apparatus which has two board transfer devices provided in parallel relation for respectively transferring boards in a predetermined transfer direction. The system further comprises at least one component supply device for supplying components of plural kinds to be mounted on the boards and at least one component placing device for picking up the components supplied from the at least one component supply device to mount the picked-up components on the boards. The system also further comprises a shifting device provided at an entrance side of the component mounting apparatus for loading the boards selectively into the two board transfer devices. The system is operable in a first production mode wherein the at least one component placing device mounts components on two boards which

have been transferred by the two board transfer devices to respective component mounting positions or in a second production mode wherein one of the two board transfer devices is used as mounting conveyor where the at least one component placing device mounts components on the boards, while the other board transfer device is used as a bypass conveyor by which the boards unnecessary to have components mounted thereon are transferred to bypass the mounting operations at the one board transfer device. The Applicants submit that the references of record fail to disclose all of the above features.

By way of illustration and not limitation, the present application describes an embodiment, as depicted in Figure 22, which is a system that includes a component mounting apparatus (50) having two board transfer devices (10a, 10b) provided in parallel relation for respectively transferring boards (Sa, Sb) in a predetermined transfer direction and a shifting device (52) provided at an entrance side of the component mounting apparatus (50) for loading the boards (Sa, Sb) selectively into the two board transfer devices (10a, 10b). The system is selectively operable in any of first and second production modes. In the second production mode, the system can make one of the two board transfer devices (10a or 10b) operate as mounting conveyor and the other board transfer device (10b or 10a) operate as bypass conveyor, whereby the boards (Sb or Sa) that do not need to have components mounted thereon can be transferred to bypass the mounting apparatus (50) without being placed under mounting operations at the one board transfer device (10a or 10b). Thus, the boards (Sb or Sa) that do not need to have components mounted thereon do not remain

stopped at the component mounting apparatus (50), so that the productivity of the boards can be enhanced. (See, e.g., page 39, lines 4-13.)

Furthermore, when the component mounting apparatus (50) runs into difficulty such as, e.g., the malfunction of the at least one component supply device (45a, 45b) or at least one component placing device (43a, 43b), the boards (Sb or Sa) that do not need to have components mounted thereon can go through the apparatus (50) by the bypass conveyor operation of the other board transfer device (10b or 10a), so that the bypassed boards can be transferred to a successive production stage (51). (See, e.g., page 39, lines 14-22.)

The Kim et al. reference does not teach a component mounting system as recited in Claim 25. For example, the Kim et al. reference does not disclose a parallel arrangement of two board transfer devices, nor does the Kim et al. reference disclose a shifting device provided at an entrance side of a component mounting apparatus for loading boards selectively into the two such board transfer devices. In the Kim et al. reference, a mounting apparatus is provided with four conveyors (C1-C4), which are arranged not in a parallel arrangement but in a series arrangement, and hence, it is impossible for the conveyors (C1-C4) to make any board go through the apparatus while the apparatus is mounting components on another board.

Accordingly, the Applicants respectfully submit that the Kim et al. reference does not disclose all of the limitations recited in Claim 25. Thus, the Applicants request the withdrawal of the anticipation rejection of Claim 25 based on the Kim et al. reference.

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Claims 1-5, 8, 9, 28, and 29 are considered allowable for the reasons advanced for Claim 25 from which they depend. These claims are further considered allowable as they recite other features of the invention that are neither disclosed nor suggested by the applied reference when those features are considered within the context of Claim 25.

Moreover, the Examiner's attention is drawn to JP2001-313492 (hereafter as "the '492 reference"), which has been cited by the Applicants. As shown in Figures 1 to 3, the '492 reference describes a component mounting system including a component mounting apparatus (1) that has two sets of substrate carrying conveyors (3, 3') provided in a parallel relation for respectively transferring boards (P, P) in a transfer direction, component supply devices (5, 5), and a single component placing device (6) for picking up the components supplied from the component supply devices (5, 5) to mount the picked-up components on the boards (P, P). The system of the '492 reference also includes a shifting device (30) provided at an entrance side of the component mounting apparatus (1) for loading the boards selectively into the substrate carrying conveyors (3, 3').

However, in the '492 reference, there is not disclosed any system that can operate selectively in the first and second production modes as recited in the Applicants' claimed invention. In fact, the system of the '492 reference is designed so that the single component placing device (6) can be used for mounting operations selectively and alternately on the substrate carrying conveyors (3, 3'). That is, the single component placing device (6) is operated for mounting operation on the board (P) at one of the substrate carrying conveyors (3 or 3'), during which time the other substrate carrying conveyor (3' or 3) is operated for the

unloading of a board and then, for the loading a new board. As soon as the mounting operation at the one substrate carrying conveyer (3 or 3') is completed, the single component placing device (6) is operated for mounting operation at the other substrate carrying conveyer (3' or 3), during which time the one substrate carrying conveyer (3 or 3') is operated for the unloading of the board on which the mounting operations have been completed and then, for the loading of a new board. In this manner, the single component placing device (6) continues to work for mounting operations alternately at the substrate carrying conveyers (3, 3').

Accordingly, the system of the '492 reference is not configured to operate in the first and second production modes as taught by the Applicants' claimed invention, so that any board (P) that does not require the mounting operations on the component mounting apparatus (1) cannot go through (bypass) the same. In short, the provision of the substrate carrying conveyers (3, 3') in the '492 reference's system is for the purpose of continual use of the single component placing device (6) for component mounting operations at the substrate carrying conveyers (3, 3'), whereas the two board transfer devices (10a, 10b) in the Applicants' claimed invention enable boards (Sb or Sa) to go through the mounting apparatus (50) in which the mounting operations are being performed at one board transfer device (Sa or Sb). Therefore, the Applicants' invention defined in Claim 25 is believed to be patentable over the system described in the '492 reference.

Furthermore, the other claims, such as Claim 8 for example, recite features that are not disclosed or even suggested by the art.

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Consequently, in view of the above discussion, it is respectfully submitted that the present application is in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Respectfully Submitted,

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